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Towards a governance and action framework for industrial transition

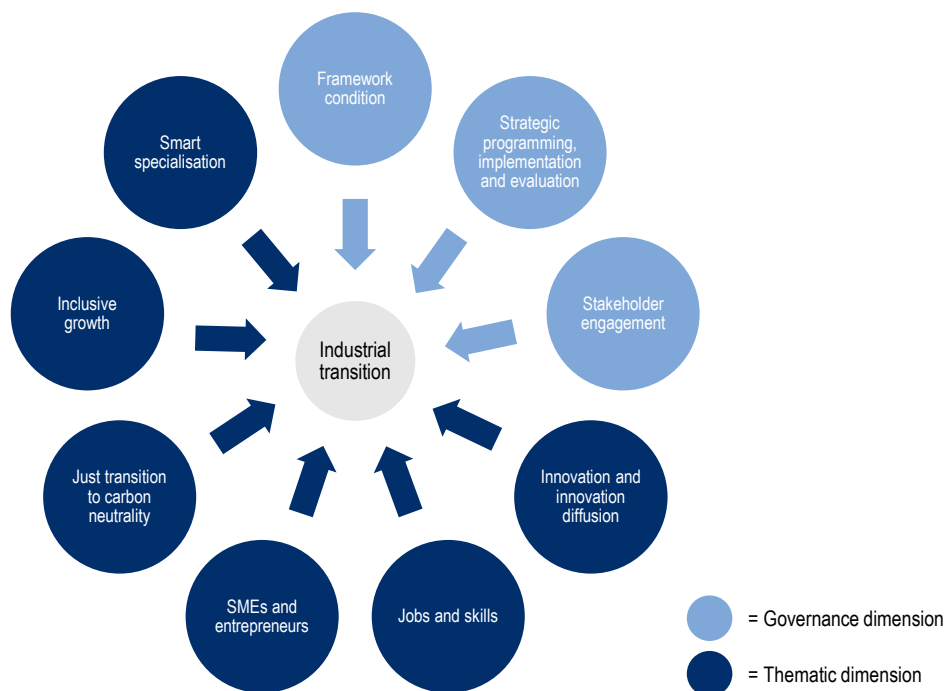
The chapter presents a framework of nine dimensions to consider when developing initiatives to support industrial transition – three of them associated with governance practices and six with thematic interventions. It also highlights lessons from experimental initiatives – High Impact Actions – undertaken by regions and countries in the European Union. These lessons can provide insights for policy makers interested in experimental governance and policy approaches for industrial transformation. Additionally, the chapter explores the scalability of these approaches and their intersection with smart specialisation strategies.

Introduction

At its outset in 2018, the OECD's work with regions in industrial transition was dedicated to identifying pathways that would help decision and policy makers ground their region's development in relevant industrial change. Innovation and innovation diffusion have been and remain a cornerstone of this effort. However, the aim was also to identify other policy dimensions that could generate change or soften potential negative consequences. To this effect, not only were policy levers identified to promote innovation and its diffusion but other thematic dimensions, such as jobs and skills, small and medium-sized enterprises (SMEs) and entrepreneurship, a just transition to carbon neutrality and greater inclusiveness, were also identified as playing a role in industrial transition. Policy levers to boost these aspects were also explored. In the past five years and with the experience of eight of the project's original pilot regions and the two original countries,¹ practical experience has been applied to round out the initial thinking. This has led to the development of revised and new ideas about what works in the relevant thematic areas. It also resulted in the identification of three governance dimensions that cannot be ignored when tackling industrial transition: framework conditions, strategic programming and active stakeholder engagement.

In total, this synthesis report has identified nine dimensions supporting industrial transition at the regional and, potentially, national levels (Figure 3.1). Not all dimensions will require the same level of attention in a given region. Yet they each contribute to industrial transition and focusing on one alone is unlikely to be sufficient to generate the scale of change necessary to lift these regions, re-energise their industrial bases and reinvigorate the well-being of their communities.

Figure 3.1. Framework dimensions to industrial transition



Source: Based on current work and adapted from OECD (2022^[1]), *Regions in Industrial Transition: Policies for People and Places*, <https://doi.org/10.1787/c76ec2a1-en>.

Underlying these dimensions is the notion of experimentation – be it in governance arrangements or policy programming. It is not necessary to generate revolutionary shifts – often it is best to base action on already understood concepts. Rather, experimentation can be a function of the way in which governance

arrangements or policies are implemented. This project has seen policy makers experiment by adjusting governance arrangements (e.g. funding mechanisms or stakeholder engagement) or rethinking the approach and design of policy initiatives (e.g. promoting regional attractiveness or actively working with micro enterprises). Experimenting, or piloting, an initiative can give policy makers a better idea of what works in a more contained way. Through these experiments, regions can gather data, test hypotheses and learn from the outcomes in order to inform future policy decisions. Experimentation contributes to evidence-informed decision making, generates active collaboration between policy makers and stakeholders, and supports learning by doing. It also can help promote greater flexibility and adaptability – not only in the policies that are designed but in how policy makers approach a problem. Experimentation often occurs on a relatively small scale – in one territorial area, focusing on one general programme or project – which can make it less costly for policy makers to implement than launching a policy or programme throughout a territory or sector without knowing whether it will work.

This chapter introduces the framework in Figure 3.1 for policy makers to consider when tackling industrial transition and elaborates on each area, beginning with the governance dimensions, then turning to the five original dimensions covered in the OECD report *Regions in Industrial Transition: Policies for People and Places* (2019^[2]). The insights and lessons shared are based on past and current work with eight regions and two countries in the European Union undergoing a process of industrial transition. Each were initial participants in a pilot action launched by the European Commission in 2018, in collaboration with the OECD. As part of this pilot action, participants were given an opportunity to design and implement a High Impact Action (HIA) that could help them experiment with a new or different approach to advancing industrial transition in their regions. The HIAs, which were carried out in 2020 and 2021, ranged from supporting SMEs (Hauts-de-France, France) to improving traditional firm performance (Centre-Val de Loire, France), ensuring social inclusion in companies (Greater Manchester, United Kingdom) and setting up a transition lab on low-carbon economy and resource efficiency (North Middle Sweden). For the most part, the HIAs focused on innovation, often combined with the transition to a low-carbon economy or other environment-related initiatives (e.g. the circular economy), industry and firm performance, or inclusive growth/social inclusion. A brief description of each HIA and the insights gained, as well as a link to the full case study, can be found in Chapter 5 of this report. In addition, in each of this chapter's boxes featuring a participant, there is a link to the case study.

This chapter presents each dimension of the framework, focusing on some of the challenges experienced in the processes of industrial transition as identified in the overall project. Moreover, it uses the experience of the pilot action participants and their HIAs to highlight how some of these challenges were addressed. The concept of experimentation runs throughout this chapter as a methodology for a new approach to the persistent and complex problems associated with industrial transition, such as job displacement, economic restructuring, environmental sustainability and social equity.

Dimension 1: Framework conditions for industrial transition

The success of industrial transition initiatives depends first and foremost on the existence of supportive framework conditions. Framework conditions can take both intangible and tangible forms. Examples of the former include political support and cultural factors such as interpersonal trust. Examples of the latter include regulations and legislation, administrative processes or requirements and funding or financing conditions. Framework conditions are typically difficult if not impossible for regional policy makers to change on their own but policy makers can sometimes influence these conditions in order to advance policy actions that support industrial transition.

To take the example of intangible framework conditions, strong and well-articulated political support cannot be controlled by policy makers; yet it also underpins their legitimacy to explore new approaches to managing industrial transition. It is necessary not only for the initiative in question but also for the teams

managing and implementing the experiment. Buy-in from the top makes association with an experiment less risky and can also help future scaling up (i.e. to more communities or other regions) or scaling out (i.e. to other sectors), should the experiment succeed. In North Middle Sweden for example, there was strong political backing for establishing a challenge lab (Box 3.3) to explore how hydrogen could advance circular and low-carbon industrial transformation, and ultimately contribute to improving well-being in the region. Political support can also encourage experimentation and risk-taking. In Greater Manchester, United Kingdom, the Good Employment Charter was borne out of political support for addressing labour market issues, such as low pay and insecure work, through innovative, voluntary bottom-up initiatives (Box 3.10). Political support was also evident in Cantabria, Spain: here, the Department of Technological Development and Industrial Entrepreneurship was entrusted with designing and implementing a programme encouraging rural agri-food micro enterprises and SMEs to increase competitiveness by adopting more energy-efficient or renewable production methods. This support was one element lending weight and legitimacy to the activities of the project team with regard to other government departments that were involved in the initiative, as well as external stakeholders.

Similar to intangible framework conditions, tangible framework conditions also affect the freedom of action of regional policy makers. For example, legislative or regulatory frameworks are often set at the national or supra-national levels. However, while regions are limited in their ability to control most framework conditions, there are times when it is possible to experiment within set parameters. For example, what if regions could provide financial support to enterprises for example, as was experimented in East and North Finland? What if it were possible to reduce the administrative burden for project beneficiaries, as was part of the Slovenian experiment?

For both East and North Finland, and Slovenia, the experimental process was a (temporary) adjustment or a “work around” to a framework condition. In East and North Finland, part of the project relied on financing a voucher system for firms directly by the regional councils. This faced the practical obstacle of Finnish legislation that does not permit regional councils to directly fund enterprise development. Yet, as the funding for the experiment came in the form of a direct grant from the European Commission, there was no national or established European Union (EU) funding mechanism being channelled through the Finnish government, effectively bypassing the obstacle. While the experiment was deemed a success, overall, the region itself is unable to institutionalise the activity due to the aforementioned legislative restrictions. However, another solution was found, given the initiative’s success. Adjustments were made to permit the country’s 15 Centres for Economic Development, Transport and the Environment (ELY Centres) to directly finance SMEs that deal with higher technology readiness projects, which they were not doing before, at least not with this explicit focus. This was considered a positive outcome of the region’s HIA. In addition, during the pilot, the regional councils requested additional responsibilities related to the financing of enterprises because they consider themselves better informed about the strengths and weaknesses of regional businesses and, thus, can promote innovative business activities more effectively (OECD, 2022^[3]). This, too, is an adaptation to framework conditions as roles and responsibilities of subnational governments are frequently set through legislation and can require higher-level approval for adjustments.

The challenge represented by the administrative burden is one that confronted most if not all participants. In a number of cases, including in Slovenia and Wallonia in Belgium, this was an issue that was targeted by the HIA as a way to encourage beneficiaries to take up industrial transition initiatives. In Slovenia, part of the experiment centred on reducing the administrative burden for project beneficiaries and building flexibility to adjust projects if necessary (OECD, 2023^[4]). Because the requirements associated with funds obtained through the government can be quite burdensome, the experiment was delivered through a third-party participant that was not obligated to follow the Ministry of Economic Development and Technology’s funding rules when designing a funding call, in this case the Slovenian toolmaker association TECOS. Having a non-governmental body, with few bureaucratic structures, responsible for implementing an innovation-oriented initiative was an experimental model never applied in Slovenia. In Wallonia, the

simplified grant allocation introduced, while not very attractive to SMEs (many of whom felt the grant value of EUR 15 000 was low for their project needs), appealed to start-ups, helping advance the experiment (OECD, 2023^[5]).

These experiences highlight that, while framework conditions may not always be auspicious for an experiment, there are ways to work within the set parameters, even if temporarily. This allows policy makers, decision makers and stakeholders to answer the “what if” questions mentioned above in a relatively safe manner.

Dimension 2: Strategic programming, implementation and evaluation for industrial transition

Strategic programming, implementation and monitoring and evaluation are at the crux of realising industrial transition and, unlike with framework conditions, policy makers can have a direct impact. This was highlighted by the regions and countries participating in this work. Being strategic about the programming to support transition is especially important with experimental approaches, which depend on clear guidelines in their design and implementation. Equally important are the implementation mechanisms used to advance industrial transition initiatives – which were found to depend greatly on clear governance structures, effective co-ordination and resource support. Finally, establishing monitoring and evaluation mechanisms is fundamental, certainly for understanding when various transition objectives have been met, but – in a more immediate manner – for knowing if an experimental (or other) policy or programme to advance industrial transition is successful.

Strategic programming for industrial transition

Industrial transition, and the programming that supports it, appears to be guided by a variety of regional, national and supra-national strategic frameworks and policies. At its core, industrial transition is about regional development and it can dovetail very neatly with national and regional development strategies, innovation policies and smart specialisation strategies (S3s). Frequently, however, other strategies guide specific aspects of industrial transition, for example policies for urban or rural development, SMEs, skills and training, and supra-national strategic frameworks, such as the European Commission’s Cohesion Policy programming, with its five policy objectives.

The ability for industrial transition initiatives to support broader strategies became apparent through the work with the various regions and countries participating in this project. The challenge for policy makers, however, is to ensure that the links are strong and that actions are coherent and mutually reinforcing. For example, Greater Manchester’s experiment with its Good Employment Charter funnelled into the Greater Manchester Local Industrial Strategy 2019, which identifies “[improving] productivity, wages, and job creation in all sectors” as a core priority for the region. In Slovenia, the Ministry of Economic Development and Technology developed the Slovenian Industrial Strategy (SIS) for the period 2021-30, in line with current European and domestic strategic documents and guidelines focusing on “green, creative and smart development”. The aim is to enhance the competitiveness, productivity and innovation of Slovenia’s economy by promoting greater inclusion and better positioning of Slovenian enterprises in international value chains. Slovenia’s experimental initiative assisted SMEs in modernising production processes to improve the efficiency, productivity and carbon intensity of production. It also generated a greater understanding of how the country’s industrial sector could contribute to ensuring that the green and digital transitions help drive the country’s industrial transition (OECD, 2023^[4]). In France, the Grand Est region developed plans to support the relocation and redevelopment of industry, including through its S3, in which its Business Parks for the Future pilot initiative is embedded. In this way, it is also complementing a series of national frameworks that can support industrial transition.² In each case, the experimental initiative

contributed to furthering local, national or supra-national strategic objectives that are linked to industrial transition.

There is another dimension to strategic programming with respect to industrial transition that is focused on the transition initiatives themselves. The HIAs highlight the need for a clear strategy to advance the transition programming – as seen in Centre-Val de Loire, France. The project team designed a comprehensive and highly strategic approach to providing industrial SMEs with assistance in recruiting and attracting the highly qualified profiles required, while also building regional attractiveness for professional and business relocations (OECD, 2023^[6]).

In addition to having a clear strategy, it was apparent that a flexible mindset with respect to the strategy was just as important, in other words not to be wedded to the strategy itself but rather to what the policy maker sought to accomplish. This was particularly evident in Cantabria, Spain. The initial experiment was to develop rural innovation hubs that would provide training opportunities, mentoring programmes, knowledge exchange and networking opportunities to support new businesses in rural areas. However, the COVID-19 pandemic halted this undertaking. The project team decided to shift the approach from developing the hubs to selecting a small set of SMEs and micro enterprises and providing tailored support to train, mentor, share knowledge and grow networks (OECD, 2023^[7]).

Finally, experimentation can provide an opportunity for policy makers to build their strategic skills through their own learning-by-doing process, which in turn can help improve the governance and institutional quality of a regional or national public administration. This was the case in Lithuania. When it developed its experimental action, there was limited internal experience with developing a comprehensive strategy to promote a circular economy, as in the past approaches had been concentrated on individual initiatives (e.g. eco-innovation, recycling strategies and analysis of the potential of the bioeconomy). Through the HIA, Lithuanian policy makers not only developed a broad-based strategy for an entirely new policy area but also provided the Lithuanian government with an action plan and roadmap for how to implement it (OECD, 2023^[8]).

Governance structures, teams and funding are pivotal to success

The work with the pilot action participants also highlighted the need to have a well-developed governance structure in place, one that includes horizontal and vertical co-ordination mechanisms, clearly assigned roles and tasks, a dedicated team for implementation and sufficient financial resources.

Governance structures

Wallonia's action had a very clear, three-level governance structure, with well-defined roles and responsibilities for all stakeholders. It also established a multi-stakeholder steering committee³ tasked with overseeing the HIA's projects, facilitating the sharing and exchange of experiences among the actors involved and validating the progress of the projects. The committee encouraged the integration of different stakeholder perspectives into the decision-making process, which gave greater credibility to its actions (OECD, 2022^[9]). For example, by involving clusters and the regional innovation agency, the steering committee ensured that input was gathered from a wide range of industrial sectors in the innovation ecosystem. This, in turn, was essential for promoting tailored solutions for plastics circularity within the region's key industries. In addition, Lithuania had a solid governance structure for its HIA and established a steering group as a lead body responsible for the overall co-ordination and stakeholder engagement processes.

East and North Finland's governance structure integrated the interests of seven different regional councils. While this is generally very challenging, it was managed by establishing from the outset a clear division of tasks among dedicated staff in each of the councils. These included tasks such as evaluating proposals, managing funds and co-ordinating meetings. Not only did the clear division of roles and tasks facilitate a

smooth implementation of the experiment but it also made it easier for the HIA's beneficiaries to contact the right people when they needed support (OECD, 2022^[3]).

Dedicated teams

Establishing a dedicated and skilled team to implement experimental initiatives was common through many if not all HIAs. According to at least one of the participating regions, this was a significant factor in the success of their experiment. In Cantabria, for example, the regional government's Department of Technological Development and Industrial Entrepreneurship managed the experimental initiative, overseeing its day-to-day implementation with the support of a dedicated project co-ordinator, who managed the projects and mobilised stakeholders, and an expert in the agri-foods sector, who provided advice and helped establish a repository of firms that could be potential collaborators in the project (OECD, 2023^[7]). Greater Manchester established the Charter Implementation Unit, which had dedicated staff to fulfil three clear functions related to the charter's membership, promotion and visibility, and diffusion to potential adherents.

Financial resources

In terms of funding and financing, policy makers wishing to undertake an experimental approach to industrial transition could find it difficult to "sell" the concept based on any associated risks of trying something new or innovative rather than turning to tried and tested policy design methodologies. In this pilot action, each region and country benefitted from a direct European Commission grant to fund the design and implementation of their HIA. However, in some instances, the region or country also contributed to the initiative. This was true in Greater Manchester, for example, where the Greater Manchester Combined Authority pledged approximately 70% of the funding for the full project over three years in order to give it time to take root. In Cantabria, while the action depended on the European Union grant, the success of the initiative led the regional government to consider funding the future scaling up and/or scaling out of the initiative's concept.⁴

A key and unsurprising lesson learned with respect to implementation is that initiatives supporting industrial transition, particularly experimental ones, require dedicated resource support, primarily in terms of staff and funding. This is because the initiatives are stand-alone. While they support meeting the objectives of larger strategies, policies or programmes (e.g. innovation or new industrial policies, S3 objectives), they cannot always depend on direct support from the funds allocated to these other initiatives.

Performance measurement and ex post evaluation criteria should play a prominent role in future initiatives

Performance measurement systems with clearly defined objectives and targets for the experiment should be developed *ex ante*. Furthermore, the experiment should include an *ex post*, independent evaluation, with the evaluation criteria being established at the outset of the experiment. Not only can monitoring and evaluation mechanisms help policy makers to identify if the experiment is meeting its aims or if something needs to be adjusted, they can also offer clear evidence as to whether the experiment can be scaled up, scaled out or if it should be suspended.

In many instances, the participating regions and countries developed monitoring and evaluation mechanisms to identify if the projects supported by their HIAs were meeting established objectives. This was the case, for example, in East and North Finland, Greater Manchester (United Kingdom), Lithuania and Slovenia, all of which established clear project objectives at the outset of the initiative, in order to facilitate the monitoring and evaluation process (OECD, 2023^[10]).

In fewer cases – Hauts-de-France and Centre-Val de Loire, France, are two examples – monitoring and evaluation systems were in place for the overall HIA. Hauts-de-France established a system that, on the

one hand, monitored and evaluated if progress was being made within the firms it was working with and, on the other, if progress was being made by the HIA itself. For the latter, it collected and centralised input indicator data and produced a final report offering a retrospective examination of the HIA's progress. While this did not offer a full evaluation of the experiment's success, it did provide a starting point for reflection (OECD, 2023^[11]). In Centre-Val de Loire, each component of its HIA had a set of attributed input and output data points and measures that could help the project team determine the success of each of the HIA's activities (OECD, 2023^[6]).

Measuring the outcomes or results directly associated with the experiment was less common. This could be linked to a lesson articulated by the North Middle Sweden team: monitoring and evaluation activities that take place sufficiently far downstream of the initiative's implementation (e.g. at least 18-24 months later) are more likely to be able to capture how the cross-pollination of ideas has led to tangible innovation-related outcomes. Yet, measurement mechanisms should be in place *ex ante* to facilitate the identification of such outcomes and ideally their impact, as well as to ensure accountability for project funding (OECD, 2023^[12]). Creating a formal monitoring and evaluation system to track the progress of the pilot actions and their success, including in terms of the environmental impact of companies once new processes were adopted, their competitiveness, the development of digital skills among employees, etc., was an ambition of the team in Cantabria. This would be developed in a second stage, as it could also help share good practices among companies and industry sectors (OECD, 2023^[7]).

To improve the monitoring and evaluation of industrial transition initiatives, several actions can be considered. The first is to develop comprehensive monitoring and evaluation frameworks. These frameworks should clearly define the objectives of industrial transition and illustrate how progress towards these objectives can be effectively monitored, while also setting clear, measurable and realistic targets and associated indicators (Box 3.1). Second, information from monitoring and evaluation processes needs to be used promptly to refine industrial transition policies. This can be facilitated by equipping policy makers with the necessary expertise and skills to effectively monitor and evaluate such policies. Third, monitoring and evaluation processes need to be designed in such a way that they can be updated in line with the evolution of industrial transition objectives.

Box 3.1. Objectives and indicators for multi-dimensional monitoring and evaluation

In order to develop comprehensive monitoring and evaluation frameworks for industrial transition, it is important for such frameworks to clearly define objectives and how progress towards them can be monitored effectively. In addition, these monitoring and evaluation mechanisms should take a multi-dimensional approach. They should not only assess economic dimensions but also take into account social, environmental and ethical concerns. This can be achieved by setting clear targets and associated indicators.

Well-chosen indicators for monitoring and evaluation should have the following objectives and characteristics:

- **Specific:** Indicators must be precise and clearly defined so that there is no ambiguity about what is being measured. Targets must be detailed and state exactly what needs to be achieved.
- **Measurable:** Targets and indicators must be quantifiable. They must be designed so that progress and results can be clearly measured.
- **Achievable:** Objectives must be realistic and achievable within the time frame and resources available. Setting impossible goals can lead to demotivation and failure.
- **Relevant:** Indicators and targets must be relevant to the objectives of industrial change. They must be directly linked to the key outcomes that the transition is trying to achieve.

- **Time-bound:** Targets must have a clear timeframe within which they are to be achieved. This helps to plan and assess progress.
- **Objectives and indicators for multi-dimensional monitoring and evaluation:** There should be a clear baseline against which progress can be measured. This could be based on historical data or the current situation at the start of the transition.
- **Periodic review:** There should be a system for regularly reviewing and updating targets and indicators according to changing conditions and lessons learned.
- **Broad communication:** Targets and indicators should be communicated to all stakeholders. This includes those involved in implementing the policy, those affected by it and those responsible for monitoring progress.
- **Balanced:** The indicators selected must provide a balanced view of performance, reflecting both positive and negative outcomes, as well as short- and long-term impacts.

Source: Based on Kanyamuna, V. and M. Phiri (2019^[13]), “Who said monitoring and evaluation is not rooted in firm theoretical foundations? A review of relevant literature”, *International Journal of Humanities, Art and Social Studies*, pp. 1-23.

Dimension 3: Using stakeholder engagement to advance industrial transition

Industrial transition, particularly when driven by innovation, is a multi-dimensional and collaborative process, which can depend greatly on the effective functioning of networks. Such networks are the channels through which knowledge, resources and learning can be shared among stakeholders, each of whom has a different role to play in developing and implementing solutions to societal challenges. At the basis of this is stakeholder engagement, which was a very strong component of almost all HIAs implemented.

There are several actions that policy makers can take to ensure a high quality of stakeholder engagement when working on industrial transition initiatives. One action includes establishing a clear and effective process for identifying and engaging with different types of stakeholders. Developing tailored communication pathways that deliver clear, concise, relevant and timely information to all stakeholder groups about industrial transition initiatives can help to build their understanding and encourage participation. In particular, such communication should aim to provide stakeholders with a full line of sight on how the initiative has been designed and will be implemented. It should also delineate the initiative’s expected impact, not only at a societal level but also on different types of stakeholders (AEBR, 2019^[14]).

In Wallonia, for instance, the clear and effective communication campaign to collect ideas from public, private and civil society stakeholders on plastics-related challenges and solutions was a factor in the HIA’s success. For instance, to provide stakeholders with full transparency and clarity regarding how the initiative would be conducted and managed, the Walloon Directorate of Economic Policy prepared a detailed scoping document. Stakeholders found that the scoping document gave them a clear idea of what to expect from the initiative. Moreover, during implementation, a stakeholder community was established to co-ordinate the HIA’s extensive communication campaign. Its activities spanned social and traditional media, as well as websites and mailing lists, and was instrumental in communicating with all HIA participants, who were quickly able to access all relevant information regarding the initiative (OECD, 2023^[5]).

Another key element to effective stakeholder engagement is fostering a culture of openness, for example by welcoming feedback from stakeholders on the design and implementation of transition initiatives (OECD, 2021^[15]). Their perspectives can often be useful in bridging knowledge gaps, ensuring inclusiveness in policy design and improving the transition initiative’s effectiveness and impact. For instance, a key element that underpinned the success of Greater Manchester’s Good Employment Charter has been its extensive co-design and co-implementation process, which called upon businesses of

different sizes and from a wide range of sectors to help define a collective vision of good employment. Their inputs helped to develop a charter document that set out an ambitious vision for industrial transformation but was also economically realistic for different types of businesses to adhere to. The inclusive vision of good employment that was defined through stakeholder engagement has helped encourage a wide range of businesses to sign up for the charter (OECD, 2023^[16]).

A culture of openness in stakeholder engagement also contributed to the success of the four workshops that were conducted as part of North Middle Sweden's challenge lab initiative. The challenge lab concept engaged participants from different professional backgrounds around a shared, societal challenge and encouraged them to explore the various components of the challenge (and possible solutions) from different perspectives. As such, it was highly dependent on effective workshop design and, in particular, guided discussions that could foster as much knowledge-sharing as possible. To improve workshop design, the workshop organisers conducted interviews with participants after each workshop, in order to shed light on what participants felt had been most and least successful for encouraging knowledge-sharing. The lessons learned from these discussions were then used to improve the design of future workshops, taking an iterative approach to enhancing the implementation quality of the initiative.

Dimension 4: Advancing innovation and innovation diffusion with a challenge-oriented approach

Innovation and innovation diffusion are drivers of industrial renewal and productivity growth, ultimately helping regions in industrial transition “catch up” to more productive regions. Boosting a region's innovation capacity and ensuring that innovation diffuses outwards – or even inwards – can boost economic growth and citizen well-being over time. Yet, regions in industrial transition tend to find themselves on the mid to lower end of the innovation scale, with lower levers of digitalisation and underutilised innovation potential. For example, in East and North Finland, only 2-3% of SMEs employ digital solutions, which are one means by which businesses can grow and become internationalised at a quicker pace than others (OECD, 2023^[10]). This can be partially explained by the weak innovation ecosystems that are often found in regions undergoing industrial transformation, including a lack of a collaborative culture, which can lead to fragmentation within the innovation ecosystem. A related issue is low innovation capacity, as can be found in Hauts-de-France in France, which was ranked as a “moderate innovator” in the 2023 Regional Innovation Scoreboard. The region's overall innovation performance was below the EU average on several indicators, including collaboration among innovative SMEs and lifelong learning (EC, 2023^[17]).

A second challenge is large innovation divides. Regions in industrial transition often lag behind in innovation compared to leading regions in their country and the gap seems to grow for at least some of them. For example, while EU data suggest that Sweden is the European Union's most innovative member state, they also indicate that there is a growing gap between its most and least innovative regions (EC, 2023^[17]). The 2021 Reglab Innovation Index identified two of North Middle Sweden's three counties (Dalarna and Gävleborg) as being the least innovative in the country and the third (Värmland) as being less innovative than the national average (Region Värmland/Region Dalarna/Region Gävleborg, 2022^[18]). Low innovation capacity has been found to be particularly prominent among its SMEs (Region Värmland/Region Dalarna/Region Gävleborg, 2022^[18]).

Generally, regions, including those in industrial transition, use a similar set of instruments to advance innovation and innovation diffusion, such as research and development (R&D) funding, technology transfer, business incubators, education and training support, and cluster development. Yet, their implementation can face governance and policy challenges when applied to transitioning regions for a number of reasons.

First, these regions may have more limited financial and human resources, which reduces their capacity to invest in R&D, technology transfer and other similar costly instruments. Second, some regional

governments may lack the necessary institutional capacity to effectively design, implement and monitor large-scale innovation and innovation diffusion policies and programmes. Third, there may be a lack of trust and co-operation among different stakeholders, including government, academia and the private sector in regions in industrial transition, affecting the exchange and development of new ideas, methods or products (OECD, 2020^[19]). While these traditional instruments are highly valuable in all regions, maximising their potential for success may require creative adaptation and new ways of applying them in regions undergoing industrial transition.

Taking a challenge-oriented approach to generating innovation and innovation diffusion

The work with pilot regions and countries highlighted the positive results of a challenge-oriented approach to policy making and its potential to provide a strong foundation for innovation and innovation diffusion in regions in industrial transition. A challenge-oriented approach, often also labelled mission-oriented, focuses on tackling a large-scale cross-sectoral, societal challenge (e.g. how to deliver a just and inclusive green transition) in a holistic manner, rather than by merely seeking to tackle one of its constituent parts (e.g. how to boost renewable energy deployment).

A challenge-oriented approach typically involves harnessing the collective expertise of a wide range of relevant stakeholders to identify challenges, collaborate and co-develop innovative policy solutions, and test their effectiveness through experimentation. It also means that policy makers should ensure that sufficient human and financial resources are allocated to support these collaborative efforts (Mazzucato, Kattel and Ryan-Collins, 2020^[20]). This approach differs starkly from traditional product and service-based innovation, which is need-based and focused on the improvement of a specific product or process, rather than large-scale industrial transformation.

In addition, a challenge-oriented approach can help overcome a series of governance challenges associated with most complex and multi-level policies, including development in transitioning regions:

- **Co-ordination challenges:** Addressing complex societal challenges requires collaboration across multiple sectors and among different levels of government. A challenge-oriented approach can help facilitate this collaboration by bringing together stakeholders from different sectors and disciplines to identify and work towards a shared goal.
- **Innovation challenges:** Solving complex societal challenges often requires new technologies and business models. A challenge-oriented approach can help stimulate innovation by providing funding and support for new ideas and encouraging collaboration among researchers, entrepreneurs and other stakeholders.
- **Implementation challenges:** Even when solutions to complex societal challenges are identified, implementing them can be difficult. A challenge-oriented approach can help address implementation challenges by providing funding and support for pilot projects and testing new ideas before they are scaled up.
- **Participation challenges:** Traditional policy approaches can sometimes exclude certain groups or stakeholders from the decision-making process. A challenge-oriented approach can help address participation challenges by engaging a diverse range of stakeholders in the problem-solving process and ensuring that their perspectives are heard and valued.

While not all regions in industrial transition are low innovators, many are experiencing growing gaps with their more innovative peers. In addition, low innovation capacity is particularly prominent in SMEs located in regions in industrial transition (OECD, 2019^[2]). Furthermore, many of these regions may face additional threats to their region's innovation ecosystems, including a lack of long-term commitment by large firms to operate in the region and resistance to change among key stakeholders in the regional innovation ecosystem (OECD, 2022^[21]).

Effective collaboration among a wide range of innovation actors in the public, private and third sectors can help manage the innovation gaps by improving the innovation capacity of regional stakeholders. The broad, cross-sectoral nature of collaboration embedded in a challenge-oriented approach has the potential to do just this, including by building knowledge and networks across different industries and stakeholder groups. This, in turn, can lay a strong foundation to diffuse innovative solutions to societal challenges. The region of Wallonia provides an example of how a challenge-oriented approach helped its SMEs strengthen their innovation capacities (Box 3.2).

Box 3.2. Using a challenge-oriented approach to enhance regional innovation capacities in Wallonia, Belgium

Wallonia, Belgium, tested a challenge-oriented innovation call to promote innovative ideas that could support SMEs and address market needs and societal challenges within the plastics value chain. The approach involved collaborating with regional stakeholders, including firms, local authorities, civil society and environmental non-governmental organisations (NGOs), to identify and define specific societal problems related to the plastics industry, such as plastic recycling. Working across sectors and stakeholders, a comprehensive and effective policy response was developed to address these problems.

This approach is particularly useful in regions undergoing industrial transition, where quick and effective action is needed to build innovation capacities. Wallonia's success in fostering a collaborative environment among innovation actors around the circularity of plastics was a testament to the effectiveness of this approach. The initiative helped strengthen the regional innovation ecosystem by facilitating partnerships within the plastics industry and leveraging Wallonia's many regional innovation actors.

Source: Based on OECD (2023^[5]), "Wallonia's High Impact Action: "Plastics Go Green and Circular" Challenge - In-depth assessment", https://www.oecd.org/regional/governance/RIT_HIA_Wallonia.pdf.

The example of Wallonia shows that a challenge lab approach can provide significant added value to the policy mix used in regions in industrial transition, if well designed:

- Designing calls for proposals with active participation from innovation stakeholders to identify challenges and solutions can generate project ideas that are well aligned with local territorial, economic and social specificities. Moreover, the challenge-oriented approach ensured that the proposed innovative solutions could meet market needs, increasing their potential for success and long-term sustainability.
- A challenge-oriented approach helps regions tap into the collective expertise and resources of a range of stakeholders and potentially lead to more innovative and effective solutions to the challenge(s) at hand may be particularly important for regions in industrial transition that are struggling with job losses, declining economic growth and a lack of investment in new industries.
- By focusing on specific challenges and identifying the most promising solutions, a challenge-oriented approach can also guide stakeholders in prioritising their efforts and investments, ensuring that resources are directed towards the areas of greatest need. This can help maximise the impact of limited resources and accelerate industrial transition.
- Learning is part of a challenge-oriented approach as the problem-solving process generates new knowledge and insights that can be applied to future challenges.

North Middle Sweden offers another example of a region that used a challenge-oriented approach to advance its sustainable industrial transition while also aiming to support the well-being of its residents (Box 3.3). The approach was slightly different from the one taken by Wallonia. Instead of using challenge-based public calls to stimulate innovation, the region tested a challenge lab approach, which is a challenge-driven innovation and co-creation platform developed to help transition to a more sustainable society. The cross-sectoral innovation knowledge and networks that were generated through four challenge lab workshops provided a strong foundation for innovation diffusion related to the green transition in North Middle Sweden. In particular, they supported the *ex post* development of a number of cross-sectoral regional projects in the hydrogen space, which stakeholders felt would not have taken place had it not been for the workshops.

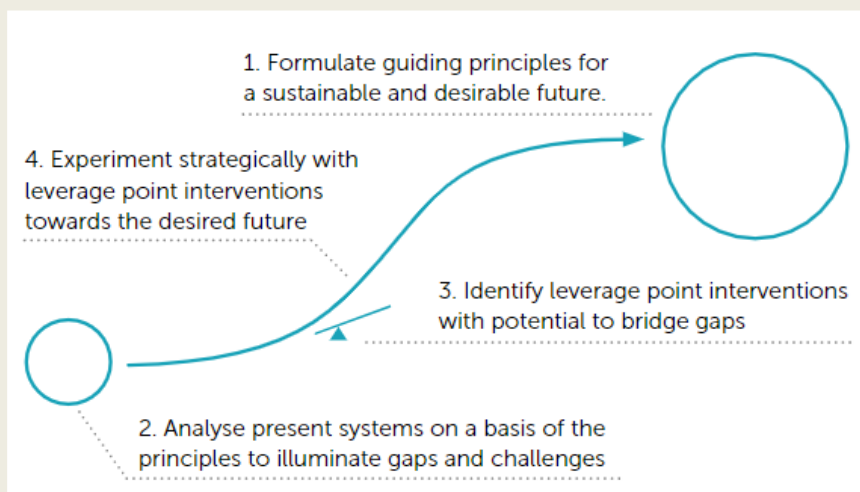
Box 3.3. The Challenge Lab North Middle Sweden

In 2019, the region of North Middle Sweden established a space for collaborative transformation and trust-building in the region: the Challenge Lab North Middle Sweden.

As a first step, the region formed a working group to identify and frame the challenge with which the lab should contend. The region decided to focus on how to develop hydrogen production, because of its regional focus on sustainable production and advanced manufacturing.

As a second step, the challenge lab designed a series of workshops to: i) establish guiding principles; ii) analyse the current situation and gaps; iii) focus on the potential in the region to bridge the gap; and iv) identify priority actions and next steps (Figure 3.2).

Figure 3.2. Primary steps in a back casting process in the challenge lab



Source: (Challenge Lab NMS, n.d.[22])

An important focus of the challenge lab was stakeholder engagement from the region's quadruple helix (e.g. industry, academia, civil society and the public sector). The lab was instrumental in building closer relationships among actors that did not previously co-operate. Not only did it strengthen co-operation activities among the different partners, it led to joint applications for EU projects, generating opportunities for collaboration.

The experimental design and effective implementation of the challenge lab workshops created a platform for the cross-pollination of new knowledge and networks that could further support the integration of hydrogen into North Middle Sweden's energy system. Subsequently, the lab has played an important role in supporting the fruition of regional projects in the hydrogen space, both through the Challenge Lab Seed Fund and through the external collaboration of challenge lab participants on new hydrogen projects.

Source: Based on OECD (2023^[12]), North Middle Sweden's High Impact Action: The North Middle Sweden Challenge Lab - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_North_Middle_Sweden.pdf

The challenge lab approach in North Middle Sweden shows how bottom-up and collaborative industrial transition initiatives can help build trust among local stakeholders and in government. This matters particularly for regions in industrial transition as they may experience economic uncertainty, social upheaval and a loss of trust in traditional institutions. A challenge-based approach can help build trust in regions in industrial transition in several ways:

- **Increased transparency:** Challenge-based policy making involves engaging citizens and stakeholders in the policy-making process. This can help increase transparency and build trust by providing opportunities for citizens to participate and have their voices heard.
- **Results-oriented action:** A challenge-based approach is focused on achieving specific outcomes or goals. This can help build trust by demonstrating that the government is committed to delivering measurable results and is accountable for its actions.
- **Collaboration:** A challenge-based approach involves working collaboratively with stakeholders, including businesses, civil society and academia. This can help build trust by demonstrating that the government is listening to diverse perspectives and is committed to working together to address complex challenges.

Summary of main insights from using a challenge-oriented approach to support regional innovation diffusion

Applying a challenge-oriented approach to an industrial transition challenge, such as alternative energy sources or plastics recycling, requires careful planning and execution to ensure that it remains effective and relevant as it is implemented. The following considerations should be taken into account by policy makers in regions in industrial transition wishing to adopt the approach:

- **Stakeholders with sufficient knowledge and authority to make innovation-related decisions must be engaged.** Involving high-level government and non-governmental stakeholders that have technical knowledge of the innovation-related challenges and opportunities at hand is important in a challenge-oriented action for ensuring that collaboration is both substantive and focused on concrete results. In the case of the challenge lab workshops, the lack of high-level political participation and the lack of stakeholders with technical knowledge of energy production were described as two factors that may have limited knowledge sharing.
- **Dedicated and skilled staff are essential to supporting a challenge lab approach.** Since challenge lab approaches depend on guiding stakeholder collaboration in a way that effectively contributes to knowledge sharing and network building, trained staff are necessary to ensure effective design, implementation and facilitation of workshops, in addition to monitoring and evaluation. They should be fully trained prior to the launch of the initiative in order to ensure good-quality outcomes.
- **Measuring the impact of a challenge-oriented initiative requires sufficient time to elapse before being able to capture results.** When monitoring and evaluation activities take place

sufficiently far downstream of the initiative's implementation (e.g. at least 18-24 months later), they are more likely to be able to capture how the cross-pollination of ideas has led to tangible innovation-related outcomes. In the case of North Middle Sweden's initiative, because no time was allowed to elapse between the end of the challenge lab workshops and final interviews being conducted, it is difficult to know the full extent to which the workshops contributed to the development of concrete regional innovation solutions.

Challenge-oriented approaches are a recent technique to implement innovation policy making. They aim to tackle a large-scale cross-sectoral, societal challenge and build networks that can: i) identify the constituent parts of the challenge; ii) collaborate and co-develop innovative policy solutions; and iii) test out their effectiveness through experimentation. It should be noted that there are very few evaluations of challenge-oriented approaches to date and almost all of them rely on traditional (non-systematic) evaluation tools and methods.

Dimension 5: A broad approach to building skills for the future of work

Many regions in industrial transition face a talent deficit, affecting the ability of employers to fill vacant jobs. Two factors can contribute to this. First, the resident labour force may lack relevant skills to contribute to emerging industries. This could, for example, reflect a skills mismatch at the regional level, with workers and managers having been trained in traditional industries such as manufacturing and therefore finding themselves ill-equipped to adapt to new technologies and industries. Second, the region itself may be considered an unattractive place to live or work by potential employees. There could be any number of reasons for this, ranging from a lack of job opportunities and limited physical connectivity to a lack of amenities or poor public services (e.g. education, healthcare). However, when such perceptions become widespread, they risk creating difficulties in attracting talent (and investment) from outside the region to fill vacant jobs. For example, in the Centre-Val de Loire region in France, more than 70% of the positions linked to industrial projects were considered difficult to fill in 2019 due to a lack of suitable candidates (Dev'up Centre-Val de Loire, 2019^[23]). The lack of talent hinders industrial transition by limiting the development of new sectors, limiting innovation in existing sectors and dampening the prospects of firms to modernise and expand, resulting in a further loss of economic activity and jobs.

As regions and countries evolve and advance their industrial transitions, so do the skills requirements for their workforce. For policy makers, this not only means providing support to help industrial transition regions diversify their economic activities into new and emerging industries but also identifying ways to revitalise employment and boost productivity in traditional industrial sectors, where such regions have historic economic strengths. For example, in traditional industrial sectors, for example, policy instruments such as company audits and coaching can be deployed to nurture an innovation culture and facilitate new and digital skills development, as is evidenced by a pilot policy programme from Hauts-de-France that focused on industrial SMEs (OECD, 2023^[11]).

The challenge for regions in industrial transition lies not necessarily in implementing policies supporting jobs and skills but rather in designing policy mixes that package different types of support and seek an integrated approach to upskilling. Additional challenges include getting the governance of different policy levers right and working out the modalities of how support should be provided and to which stakeholders in the region.

Skills and knowledge requirements in regions in industrial transition are changing and becoming increasingly complex. Catalysts for this change include globalisation, demographic changes, migration patterns and industrial decline in certain sectors (e.g. manufacturing and extractives) and rapid technological advances in others (e.g. digitalisation and connectivity) (OECD, 2019^[2]; Kim et al., 2022^[24]). Given the changing skills demands of employers, regions in industrial transition – particularly those facing skills shortages, including due to outward migration, attractiveness issues, lower than average levels of tertiary education and/or poor opinions of vocational education training (VET) – may need to take a more holistic and strategic approach to equipping their communities for the future of work. This means recognising the interdependence between employer demands, skills supply, firm competitiveness and regional attractiveness, and seeking to develop policies and programming that form a comprehensive framework to address the transition process. This also means recognising the centrality of skills development for improving innovation potential and productivity in traditional industries – not just new and emerging ones – as is discussed in the subsequent section.

Sustaining a skilled workforce by improving recruitment practices and regional attractiveness

Ensuring an appropriate skills base is a significant challenge for many regions in industrial transition. Such an approach entails a co-ordinated effort to experimentation, not only with policy levers for skills development but also related challenges, such as fostering regional attractiveness. In order to be effective, a co-ordinated approach first needs to identify the obstacles that are inhibiting skills development in a specific region and then support the development of targeted actions in response.

An example of a HIA that adopted a co-ordinated approach to strengthening skills and attractiveness in order to better manage industrial transition comes from France's Centre-Val de Loire region. The industrial fabric of the region is highly specialised in sectors such as pharmaceuticals and plastics; however, it also has significant intra-regional disparities in industrial employment. In order to fill vacant higher-level management and administrative posts in industrial SMEs, the region developed a policy experiment that strengthened recruitment practices while simultaneously taking steps to improve prospective employee perceptions of rural and remote areas within the territory as attractive places to live (Box 3.4).

Box 3.4. Experimenting to build a skilled management workforce in the Centre-Val de Loire region, France

In order to advance its industrial transition, the region of Centre-Val de Loire in France experimented with a well-thought-out package of innovative policy levers to ensure a skilled workforce in the region, particularly in high-level managerial and administrative positions.

The action responded to the industrial transition challenge of ensuring an appropriate skills base in the region. For Centre-Val de Loire, the lack of skills in higher-level management and administrative posts, along with the limited ability of firms in the region to recruit such talent, appeared to be at the core of the problem.

The experimental pilot policy action addressed two main obstacles. First, it provided support for human resource management on topics such as recruitment, employer branding and employee loyalty in industrial sector companies with fewer than 500 employees. Second, it developed regional attractiveness measures that could entice highly qualified and high-potential profiles to work in the region.

The actions designed and implemented under the HIA were unprecedented in the region, leading to a distinctive learning opportunity. The activities consisted of regional attractiveness mapping, workshops for SME chief executive officers (CEOs), enterprise audits and targeting industrial SMEs at a recruitment fair. These activities led to a series of insights for future support on ensuring an appropriately skilled workforce, including better targeting the region's rural areas, reviewing the audit process, providing talent attraction workshops and better understanding candidate expectations.

Source: Based on OECD (2023^[6]), Centre-Val de Loire's High Impact Action: SME Executive Recruitments and Skills Competence Audits and Regional Attractiveness Strategy - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_Centre-Val_de_Loire.pdf.

The example from Centre-Val de Loire highlights a series of policy lessons for how a co-ordinated approach to skills and attractiveness policy making can work in industrial transition regions:

- **Identifying specific gaps and obstacles to talent retention:** By understanding employer needs (e.g. through formal study) and then developing a comprehensive skills strategy, policy makers can identify skills gaps and propose policy measures to ensure a skilled management workforce.
- **Reinforcing regional attractiveness measures to attract a skilled workforce:** Policy makers in regions in industrial transition can help their SMEs to do so through regional branding and working together to develop messages that highlight the unique selling points of the region. This, in turn, helps the region's firms to focus not only on the company and the professional opportunities but also on the benefits of living and working in the region.
- **Promoting the attractiveness of rural areas in industrial transition:** Geographical location plays an important role in the attractiveness of positions to be filled. In the Centre-Val de Loire example, a study revealed that nearly 69% of qualified employees from the Ile-de-France region would be willing to live and work in the Centre-Val de Loire region but not necessarily in its rural areas (Association Pour l'Emploi des Cadres, Dev'up, 2019^[25]). This suggests that regions in industrial transition with important industries in rural and remote areas need to highlight the advantages of living and working specifically in these areas to attract qualified managerial employees from elsewhere. It may also mean adopting specific measures that help make these territories more attractive, such as investments in transport, housing, connectivity or other services.

Supporting traditional industries with a potential for innovation to adapt to the future of work

Technological – including digital – transformation is often associated with technology-based businesses or start-ups. However, traditional industries also need support in this area. This, in turn, can lead to increased profits, job creation and economic growth (Appio et al., 2021^[26]). Taking advantage of technological innovation may require new and experimental action to spur interest among traditional companies to engage with it. Helping SMEs or other companies adapt to the future of work through dedicated coaching and mentoring to develop the leadership skills required to implement a successful transformation strategy is one way to go about this.

One example of an experimental action to support the future of work comes from Hauts-de-France, in northern France. The region faces a series of challenges in traditional industrial sectors, including a low innovation capacity, a shortage of skilled workers and limited competitiveness. To address these challenges, the region developed, tested and improved an experimental methodology and a set of tools to support the digital transition of traditional companies as a means to advance its industrial transition (Box 3.5).

Box 3.5. Accelerating the digital transition of traditional industrial companies in Hauts-de-France

Hauts-de-France's SMEs are confronted with a need to adapt to complex, digital and personalised production systems in order to stay competitive. The HIA supported industrial SMEs in acquiring the skills needed to integrate digital technologies into their production processes, product design, product distribution and service provision by offering coaching and advisory services. The primary goal of this action was to enhance the competitiveness of regional companies, which would lead to future job creation in the region.

The Hauts-de-France region experimented in order to tackle three large industrial transition challenges: i) supporting SMEs with innovation potential for innovation; ii) supporting SMEs in their digital transition; and iii) strengthening the breadth and depth of public support for regional innovation.

The pilot action offered an in-depth diagnosis of digital maturity and coaching to help SMEs integrate digital technologies into their production processes, product design, distribution and service provision. It also created a collaborative ecosystem that brought together companies, digitalisation experts and the public sector to co-develop innovative solutions to the challenges of digital transformation in industrial SMEs.

The example of Hauts-de-France highlights the critical role of coaching and mentoring programmes in supporting traditional companies through industrial transitions. In Hauts-de-France, policy makers have recognised that every company's transition process is unique. Therefore, a targeted coaching approach based on a company audit is more effective than a standardised digitalisation support programme that is broadly applied across companies and industries. Additionally, experimenting with coaching and mentoring programmes can foster a culture of learning and development within the company and inform policy makers in regions undergoing industrial transitions.

Source: Based on OECD (2023^[11]), Hauts-de-France's High Impact Action: Accelerating the digital transition of traditional industrial companies - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_Hauts-de-France.pdf.

The example of Hauts-de-France holds a series of policy lessons for regions in industrial transition wishing to support the future of work by boosting digital and leadership skills in traditional industries:

- **Fostering flexibility in digital-support strategies:** Digitalisation can vary across firms and industries, requiring a flexible approach. Support should be provided to SMEs for upgrading processes and adopting digital business models rather than demanding complete digital transformations. Support should emphasise the importance of building a culture of digital transformation and empowering employees to embrace new technologies and ways of working.
- **Using non-financial incentives for capacity building:** Non-financial incentives, such as coaching and mentoring programmes, can support industrial transition and enhance the skills of the labour force. These programmes help SME managers gain a broader perspective, focus on strategic planning and work on the company's future instead of day-to-day operations. By offering non-financial support, policy makers can assist SMEs in adapting to new market conditions and improving their overall performance.

Summary of main insights from experimenting with new approaches to preparing the future of work

Industrial transitions pose challenges for regions that are heavily reliant on traditional industries or lack specific skills as skill requirements evolve in a transition process. To address these challenges, experimentation with policy levers and integrated approaches is necessary. By testing different strategies to better match skill supply and demand, regional skills bases can be strengthened, capacity can be built and regional attractiveness could be enhanced. These elements can support traditional industries as well as emerging ones, as is seen in the case of the experimental action in Hauts-de-France.

Experimental mechanisms that can help regions strengthen firm capacity to meet human resource needs in new and emerging areas may need to be combined with policy levers that foster regional attractiveness and make certain areas of a region more attractive places to live and work, as is evidenced by the experimental action in Centre-Val de Loire (Box 3.4).

Dimension 6: Helping SMEs and entrepreneurs build innovation capacity to advance industrial transition

Policies that can support the innovation capacity of less innovative firms – be they SMEs, micro enterprises or start-ups – can lift productivity, as can policies that aim to build a better-quality business environment for innovation. Yet these firms tend to be less innovative and less open to innovation than larger firms. Furthermore, SMEs dominate the business ecosystem in many regions, including those in industrial transition. However, such regions are often home to many micro or family enterprises that are even less adept – or interested – than SMEs in capitalising on what innovation can offer. The reasons for this are numerous but can include a feeling that innovation is “not for them” or that they lack the necessary expertise, awareness, human or financial resource capacity to tap into funding opportunities. Often, accessing funds that could support innovative processes, which in turn could contribute to industrial transition, comes with high levels of administrative burden or requires awareness of new processes or embracing concepts that smaller business owners or workers may not have or are not comfortable doing. For example, one of the lessons learned from Hauts-de-France is that SME managers must be prepared to communicate a clear vision of the benefits of industrial transition and digitalisation to their employees (OECD, 2023^[11]). Another challenge SMEs, unlike larger companies, face is ensuring their competitiveness and that their ideas or new products find a market. These same issues confront start-ups and can hinder the efforts of a potential entrepreneur.

Addressing SME and entrepreneurship-related challenges – especially those associated with low innovation capacity, resources and mindset – in the context of industrial transition may require a recombination and/or adaptation of existing policy levers. For example, traditional industrial transition policy tools such as innovation vouchers may need to be modified to encourage the development and adoption of new technologies that promote sustainability and environmental protection. One example of this approach can be seen in East and North Finland’s initiative to experiment with innovation support for SMEs (Box 3.6). In addition, policies that explicitly promote collaboration between the public and private sectors may be necessary to facilitate innovation take-up. This may either involve changing the governance structure of existing policy levers or experimenting with the modalities of the policy lever, as was done in Slovenia for example (Box 3.7). Consideration can also be given to providing a combination of financial and non-financial incentives to help launch innovative products on the market, as was Wallonia’s approach and also seen in Cantabria. The next section focuses in on these levers and how they have been used in experimental pilot programmes.

Supporting SMEs through collaborative funding models and innovative governance arrangements

Traditional forms of financing, such as bank loans, are often difficult to access for SMEs or entrepreneurs in any region and possibly more so in regions in industrial transition, especially in those facing economic challenges (OECD, 2019^[2]). Experimenting with new funding models can reduce investment barriers, thereby stimulating innovation in transition regions by providing resources, expertise and support for entrepreneurs, start-ups and established companies to develop and commercialise new products and services. In addition, adjustments to the innovation policy governance framework that encourage and facilitate the creation of new businesses and technologies could be valuable as well.

Policy lessons regarding the use of a new funding mechanism to promote experimentation with innovative tools and products can be drawn from East and North Finland's experience, where a new funding model was implemented to expand the scope of innovation among enterprises in the region's tree, wood and timber value chain (Box 3.6).

Box 3.6. Experimenting with a new funding model for innovation in East and North Finland

The region of East and North Finland experimented with a new funding mechanism which enabled its seven regional councils to broaden the innovation base and strengthen the value chain in the forestry sector. The councils provided financial vouchers of EUR 40 000-45 000 to 7 collaborative cross-regional projects consisting of 1 or more companies and R&D organisations operating in East and North Finland.

The initiative encouraged cross-regional collaboration in a large and sparsely populated area and managed to reduce the long physical distances between the seven sub-regions by strengthening the linkages among governments and enterprises and helping stakeholders expand their networks. It allowed enterprises and R&D organisations to look beyond their immediate area for project partners, building synergies and institutional social capital. It shows that fostering a cross-regional dimension by joining forces between regions of sub-critical size can support industrial transition and could have a wider impact on the future of regional development in the larger region.

The initiative also underlined the importance of multi-level governance for a successful industrial transition. Regional councils were given additional responsibilities related to the financing of enterprises because they considered themselves well informed about the strengths and weaknesses of regional businesses and, thus, better positioned to promote innovative business activities. Meanwhile, the national government's role was to provide a clear strategic direction for innovation and develop national frameworks to promote the innovation base.

Source: Based on OECD (2023^[10]), East and North Finland's High Impact Action: Cross-regional Voucher System to Stimulate Digitalisation and Circular Economy in the Tree, Wood, and Timber Value Chain - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_East_North_Finland.pdf

East and North Finland's approach to experimenting with new funding models offers a number of policy lessons for policy makers in regions in industrial transition:

- **Short-term funding may be more appropriate than long-term funding for diffusing innovation.** The beneficiaries of the HIA agreed that flexible and short-term funding is effective when testing new products and that it is often preferable to long-term funding, which tends to be more rigid from a procedural point of view (OECD, 2022^[3]). This is particularly true for small SMEs that often encounter challenges when investing in new products and adapting to the current needs of digitisation and the circular economy due to a lack of financial support. Short-term funding is

often more prevalent in start-up environments where the priority is to develop and test innovative products in a short period.

- **Regional government bodies can be strong enablers of innovation.** Thanks to the HIA, East and North Finland's regional councils were able to play a more proactive role in promoting innovative business development. This represented a shift from the traditional focus of regional councils which centred on facilitating knowledge exchange and providing educational opportunities. Through the HIA, regional councils supported enterprise product development and helped drive innovation in their respective regions. This capacity was vital not only to unlock the potential of local businesses but also to fostering the growth of new industries in East and North Finland.

Strengthening funding for SME innovation capacity by testing governance arrangements

An additional example of experimentation with a new approach to funding, from Slovenia, shows how adjusting governance arrangements can create the necessary conditions to help businesses engage with the process of industrial transition (Box 3.7). Slovenia's experience indicates that just because an innovation finance instrument has been implemented under a long-standing governance arrangement, that does not necessarily mean that it is the most effective approach for supporting SMEs and their innovative ideas. In the Slovenian case, Slovenian toolmaker association TECOS was better placed to implement the voucher programme for at least two reasons. First, it had more detailed knowledge of the business needs of SMEs than the central government, which helped it better select projects to support the initiative's aims. Second, project funds for beneficiaries were channelled through TECOS and not the national government, resulting in less administrative burden for the applicant firms.

Box 3.7. Using a new governance approach to broaden the innovation base in Slovenia

Slovenia implemented an innovation voucher system to encourage collaboration between universities and industries, with the aim of promoting industrial transformation in SMEs. This governance and policy experiment was also designed to gauge the demand for larger-scale demonstration centres that could facilitate research and knowledge transfer related to Industry 4.0. Once established, these demonstration centres would accelerate digital transformation by promoting the development and use of smart factory concepts.

Unlike a typical top-down approach where the government sets the agenda and calls for funding without considering the actual needs of businesses, the Slovenian HIA took a different approach. It involved TECOS, the Slovenian toolmaker association, in the call development process, given its deep knowledge of the current business needs of SMEs. TECOS acted as a bridge between the central government and beneficiaries, responding as best it could to the needs of both parties.

In addition, TECOS acted as the funding agent for the projects associated with this HIA. By dissociating the funding channel from the government with its heavy administrative processes when applying for funds, SMEs or other firms responding to the call for projects could take advantage of lighter administrative processes. This made the call more attractive, particularly for SMEs, which often face capacity gaps in responding to calls. It also highlighted the potential deterrence that a high administrative burden can have on responding to more traditional project calls.

This new model highlights that associations such as TECOS, which are close to industry, are well suited to administering public innovation vouchers for Industry 4.0. They possess the necessary proximity and knowledge of Industry 4.0 to support industrial SMEs and serve as an intermediary between policy

makers and businesses. Moreover, such an intermediate body can reduce the administrative burden on businesses, making it easier for them to apply for calls without expending significant resources.

Source: Based on OECD (2023^[4]), "Slovenia's High Impact Action: Establishing an Industry 4.0 Transformative Mechanism - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_Slovenia.pdf.

The Slovenian case provides a compelling example of how experimental financing initiatives can benefit regions undergoing industrial transitions. These initiatives offer an opportunity for local and regional stakeholders, which may not traditionally be responsible for financing innovation-related initiatives, to test their capability in this area and explore how they can leverage their proximity to local businesses for greater impact.

Testing financial and non-financial incentives to encourage innovation among smaller enterprises

Financial incentives to help micro enterprises, SMEs and start-ups flourish will always be welcomed by business owners and entrepreneurs. For example, North Middle Sweden's challenge labs included the possibility of seed funding for a set of selected hydrogen projects, which was an incentive for firms to engage in the initiative (OECD, 2023^[12]). However, not all initiatives have financial incentives built in, nor is their provision always possible for regional or national governments.

Wallonia, Belgium, worked around regional funding constraints by combining financial and non-financial incentives to induce firm participation in its HIA: the Plastics Go Green and Circular challenge. The aim was not only to help firms commercialise new, innovative services and products but also to ensure these offerings were developed by start-ups and SMEs and targeted innovative, sustainable solutions for plastics disposal. The firms behind each selected project received a lump sum grant of EUR 15 000. Many SMEs felt that this was insufficient to meet their project needs but smaller firms and start-ups found it to be sufficient. In addition, the participating firms also received coaching and mentoring to help them implement their projects. Another draw for smaller firms was a more streamlined approach to receiving grant funds, reducing an administrative burden that otherwise may have strained resources and prevented them from participating in the initiative. Participants indicated that the HIA promoted an environment to test and experiment with innovative projects that may not have been funded through regular project calls. Start-ups, SMEs and micro firms stated that they would not have experimented as extensively as they did without grants and coaching (OECD, 2022^[11]).

In Cantabria, Spain, SMEs in the agri-food sector are not digitised and cannot always afford the upfront investment costs of a green or digital transition. In addition, there is scepticism regarding the usefulness of such an investment (OECD, 2023^[7]). Many of the region's firms in a more remote or rural area are often family-owned and/or micro enterprises producing artisanal products. They have used the same production methods for decades. Cantabria focused on digitisation on the one hand but also on helping businesses become more energy efficient, which could lead to savings and in turn be used to advance digitisation ambitions. Thus, one of the incentives for Cantabria's smaller firms to experiment – not only with the initiative but with their own business or production models – was the possibility of significant cost savings. Another incentive was to become a more sustainable business, which could also be used in marketing campaigns (OECD, 2023^[7]).

Summary of main insights of how innovation funding levers can be used in new ways to support SMEs and entrepreneurship during industrial transition

Innovation funding levers can play an important role in supporting SMEs and entrepreneurship in regions in industrial transition. In particular, short-term and flexible funding models, such as voucher systems, can

be more effective for supporting innovation than long-term funding arrangements, which tend to be more rigid from a procedural point of view. Whatever the funding lever ultimately adopted however, it is important for policy makers to seek to streamline the administrative burden it places on firms, which may have limited human resource capacity to deal with red tape. It should also be noted that, while funding levers are important, non-financial levers can also play an important role in supporting SMEs and entrepreneurship. For instance, capacity-building support for micro-entrepreneurs through coaching can also help to support innovation.

Dimension 7: Expanding on a sustainable and just industrial transition

As governments recognise the need to address environmental and energy transitions, they are increasingly focusing on managing industrial transition in a way that aligns with regional, national and international climate action and sustainability goals, such as the United Nations Sustainable Development Goals (SDGs). Regions in industrial transition face particular challenges in transitioning towards a climate-neutral economy. Many such regions have traditionally relied on industries that emit high levels of greenhouse gases, such as coal mining and heavy manufacturing. Transitioning away from these industries can have large economic and social impacts, as jobs are lost and communities are disrupted.

Any industrial transition should be carried out in a just manner, meaning that it should not disproportionately affect certain industries, communities or individuals (OECD, 2019^[2]). By involving stakeholders in policy making, policies are more likely to be effective and acceptable to those who will be affected by them. One example of this approach can be seen in Lithuania's experiment with a co-creation process to build a sustainable industrial economy (Box 3.8).

When supporting an industrial transition, it is also important to ensure that progress made in one area does not unjustly lead to setbacks in another. Experimental policy action can help address this issue by enabling policy makers to test policies and identify potential problems and trade-offs before significant resources are invested in their implementation. This approach was adopted by France's Grand Est region during the implementation of its sustainable industrial parks concept.

Past work with regions in industrial transition highlighted policy levers that focused on creating "green" business and job opportunities, with an eye on ensuring minimal disruption in communities. However, many such policy responses, such as stimulating green behaviour in firms to boost green innovations or encouraging innovation in environment-friendly technologies, take time to come to fruition. There are many instances where local actors (e.g. local authorities or private sector beneficiaries for EU or other support funds) still do not have experience in designing or presenting projects to support the shift to a green, climate-neutral or more energy-efficient business model. The regions and countries participating in the pilot project took the opportunity of developing an HIA to work on this "green" dimension of industrial transition. Frequently the initiatives they developed had a sustainability, environmental or climate-neutral component. They also had a co-creation component, which could help build ownership for climate-neutral shifts among stakeholders – important as these can frequently be met with resistance.

Using co-creation processes to support a sustainable and just industrial transition

Experimenting with co-creation processes is one method that can help with generating a sustainable industrial transition. Co-creation is a collaborative governance approach whereby multiple stakeholders, including policy makers, industry representatives, academics and civil society, actively participate in the design, implementation, and evaluation of public policies (OECD, 2020^[19]). Co-creation's potential to support inclusive knowledge-sharing and consensus-building among a wide range of relevant stakeholders, each of whom is united in pursuit of a common societal objective, provides an important precondition for a successful just transition.

Collaborative and co-creation processes can be used to explore a variety of policy topics and approaches related to industrial transition. For example, in regions transitioning from fossil fuel-based industries to renewable energy, co-creation processes can be used to develop policies that support the growth of renewable energy industries, while also addressing the place-based social and economic impacts of the transition (OECD, 2020^[27]). Similarly, in regions transitioning from traditional manufacturing to advanced manufacturing, co-creation processes can be used to develop policies that support the adoption of new technologies, the development of skills and training programmes, and the establishment of cross-sectoral partnerships that bring together industry, academia and government.

Co-creation processes can also be used to explore new policy topics for industrial transition and help create policy roadmaps to advance industrial transition in new policy areas. In Lithuania, for example, the extensive co-creation of a policy roadmap for developing the circular economy helped to ensure that the different professional backgrounds and interests of public, private and third-sector stakeholders were taken into account during drafting while building a common contextual understanding among participants (Box 3.8). It also helped to align top-down policy decisions with bottom-up proposals, created new links between key players in the circular economy value chain and promoted a step change in the attitudes of key industries.

Box 3.8. Using co-creation to advance industrial transition in Lithuania

Lithuania designed an experimental policy action to begin a shift towards a circular economy in industry. Central to the design of policy action was an experimental co-creation process for a Circular Economy Roadmap, which implied a shift away from a traditional top-down approach to policy making and instead emphasised collaboration, participation and the co-creation of policies with stakeholders.

The process consisted of two steps:

1. **Mapping Lithuanian circular economy stakeholders**, identifying approximately 700 individuals from public authorities, higher education and research institutions, various industrial sectors and their value chains, business associations, waste management bodies, consumer and NGOs.
2. **Establishing a Roadmap Co-ordination Group of 50 representatives and experts** from governmental, industrial, business, non-governmental, municipal, waste management, consumer, science and education institutions, to develop a systematic dialogue approach and involve stakeholders from different levels of the professional hierarchy (ranging from technical experts to managers), diverse areas of interest and with different competencies and experiences.

The co-creation process proved to be very effective for encouraging stakeholder participation, ownership and raising awareness. It allowed for the integration of diverse interests, roles and relationships into the roadmap drafting while building a common contextual understanding among stakeholders. Further, it aligned top-down policy decisions with bottom-up proposals, helped build new links between key players in the circular economy value chain and promoted a change in the attitudes of key industries.

Source: Based on OECD (2023^[8]), Lithuania's High Impact Action: Roadmap for Lithuania's Industrial Transition to a Circular Economy - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_Lithuania.pdf.

In order to be effective, co-creation processes for regions in industrial transition should be designed to engage stakeholders in a collaborative and inclusive manner. Lithuania's example provides several factors that need to be taken into account:

- **Ensuring an action-oriented approach:** The co-creation process should lead to concrete results. This not only depends on a clear understanding of the industrial transition challenges facing the region or country but also on a commitment to taking the necessary steps to address them respectively. For example, in Lithuania, while the co-creation process to develop a Circular Economy Roadmap was successful, leadership and governance challenges resulted in the roadmap not being formally adopted by the government. This risked undermining the trust of industry stakeholders who had participated in the roadmap development process in good faith. Had the roadmap document not been adopted, the trust of industry stakeholders – who had spent significant time and resources developing it – might have been undermined, with potential implications for their willingness to participate in future initiatives.
- **Facilitating learning and knowledge-sharing:** The co-creation process should be designed to facilitate learning and knowledge sharing among the stakeholders involved. This includes sharing good practices, identifying emerging trends and building capacity to address the industrial transition challenges facing regions. The co-creation process used in Lithuania proved to be a very effective tool for encouraging learning and knowledge sharing among participants who had not previously been familiar with the circular economy or its role in supporting industrial transition.
- **Keeping a flexible and adaptive approach:** Co-creation processes to advance industrial transition should be flexible and adaptive to changing circumstances, such as those brought about by the COVID-19 pandemic. This requires ongoing monitoring and evaluation of the process as well as a willingness to adjust the approach as needed based on feedback from stakeholders and results achieved. In Lithuania, this was done by holding a large number of virtual stakeholder meetings during the policy roadmap development process. The Lithuanian expert team also set up a dedicated website for communication between stakeholders taking part in the co-creation exercise (OECD, 2022^[21]).

Tackling industrial transition challenges related to industrial relocation, competitiveness and sustainability

In addition to ensuring that competitiveness is maintained during the green transition, regions in industrial transition also have to navigate de-industrialisation and relocation issues and the need to attract firms and workers (OECD, 2019^[2]; 2020^[27]). Even in cases where regions make concerted efforts to address these forces, for instance through effective strategic planning, they may still find that policy actions that contribute to solving one industrial challenge can exacerbate the difficulties faced in resolving another. Experimental approaches may be of value in these cases as they enable policy makers to test policies and identify potential problems and trade-offs before significant resources are invested in their implementation. One such example of experimental action to deal with interlocking industrial transition challenges of relocation, attractiveness, competitiveness and sustainability can be found in the Grand Est region in the east of France (Box 3.9). Experimentation and policy readjustment in light of new evidence played a key role in shaping the development of the region's Industrial Parks of the Future concept.

Box 3.9. Using a new concept to promote sustainable industrial parks in the Grand Est region, France

The Grand Est region successfully experimented with setting up a concept for a new and ambitious initiative to support demonstrator projects for sustainable industrial zones in the region, called Industrial Parks of the Future (*Zone d'activités du futur*). The wider aim of the initiative is to support development in the region's more remote areas while also making these more sustainable, more competitive and better able to attract direct regional, national and foreign investment.

In order to classify as an industrial zone of the future, such a zone needs to follow a pre-defined set of criteria, including having a neutral impact on the soil and excellent sustainability credentials, supporting the construction of a dynamic local ecosystem as well as placing people at its core and creating a liveable environment.

The regional development agency Grand E-Nov+ developed an assessment tool to evaluate the current status of existing industrial parks. The tool allows the identification of the most relevant development levers for an area.

The initiative responds to a series of industrial transition challenges that the region Grand Est is facing, including reversing the trend of de-industrialisation, strengthening industrial know-how and creating new activities with high added value, and responding to ecological and climatic challenges.

The initiative also helped support a just transition by involving a large set of regional stakeholders in its elaboration, which co-developed the initiative. More than 40 actors, including local authorities, industrialists (large groups and SMEs of the Grand Est), research institutes, property developers, etc., were involved.

Source: Based on OECD (2023^[28]), L'Action à Fort Impact du Grand Est : Cluster Transition - Évaluation approfondie, https://www.oecd.org/regional/governance/RIT_HIA_Grand_Est.pdf.

The HIA implemented by Grand Est presents a couple of important policy lessons for managing industrial transition:

- **Openness to readjustment helps advance industrial transition.** The pilot initiative initially focused on creating an innovation hub. However, the role that the hub would play in supporting a just transition was not clear in the context of an already-complex landscape of actors involved in the region's economic development. Following a feasibility study, a readjustment of the initiative ensued, spurring its orientation away from the innovation hub concept towards a new focus on supporting sustainable industrial zone projects in remote areas of the region. The success of the initiative in its adjusted form underlines how openness to experimentation and reorientation can help to identify potential issues early on in transition initiatives and enable refinements to achieve more desirable outcomes.
- **Collaboration and involving multiple stakeholders, including private actors, is crucial for the success of developing sustainable industrial parks or other novel initiatives in a region.** The selection of stakeholders should be based on their expertise and should aim to obtain consensus among them. Additionally, being a pioneer in a field can attract new actors and create enthusiasm for industrial conversion.

Summary of main insights from using experimental governance to advance a sustainable and just industrial transition

Governments are recognising the importance of managing industrial transition in an equitable way that also aligns with environmental and energy transitions. In such endeavours, however, they face various governance and policy challenges. Successful industrial transition requires effective collaboration between a wide range of relevant stakeholders in order to facilitate dialogue, build consensus and manage competing interests and priorities. Engaging stakeholders at all stages of the policy-making process can help to ensure policies are more inclusive, thereby increasing their palatability to citizens and ensuring that important interest groups are not left out of (what is expected to be) a just transition. Such engagement can also help to improve the effectiveness and impact of policies more broadly.

The challenge of managing many inter-related industrial transition dimensions in tandem and the need to ensure that progress in one area does not lead to setbacks in another requires not only effective strategic planning but also an openness to reorient initiatives where such efforts are needed.

Dimension 8: Fostering inclusive growth in industrial transition by reducing barriers to economic inclusion

Inclusive growth contributes to an individual's quality of life and their capacity to actively contribute to societal progress. However, generating inclusive growth is often challenging for policy makers, given that prosperity is not shared equally across regions or cities, and large economic divides can either develop or accentuate between lagging territories and those that are drivers of growth. For regions in industrial transition, one of the most important challenges is ensuring that places that were once engines of regional prosperity, but subsequently experienced a period of industrial decline, can benefit from new and emerging economic activity. A failure to address this issue risks weakening social cohesion and increasing economic vulnerability while limiting social mobility and the equality of opportunities (OECD, 2019^[2]).

Policies that aim to foster greater inclusion in the economy of unemployed, underemployed or people with a skills mismatch – both in terms of building their labour force participation and also in terms of increasing their economic value to businesses – can make growth more inclusive by increasing the employment rate, lowering relative in-work poverty and increasing the productivity and wage growth of underutilised economic groups (OECD, 2019^[2]).

Experimenting with policy levers that break down barriers to economic inclusion can be useful for supporting inclusive growth in regions undergoing industrial transition. Examples of new governance and policy action in Greater Manchester, United Kingdom (Box 3.10) and Cantabria, Spain (Box 3.11) demonstrate the potential of such initiatives for helping to manage industrial transitions.

The OECD 2019 report on regions in industrial transition highlighted that regional well-being is divided into two different strands: i) material well-being, which includes elements such as jobs, income and housing; and ii) quality of life, which includes elements such as education, health, access to services, sense of community and life satisfaction (OECD, 2019^[2]). Unemployed, underemployed and skills-mismatched workers are at risk of negative impacts on both strands of their well-being. For example, their level or quality of employment may not only have a bearing on their income levels but also on their ability to learn, derive life satisfaction and play a meaningful role in their communities.

Declining well-being is a particularly prominent risk for workers in regions in industrial transition, who are more exposed to potential long-term unemployment due to structural shifts in local skills demand (OECD, 2019^[2]). Moreover, across OECD countries, workforce groups at greater risk of labour market disadvantage tend to receive even less training, both formal and informal, compounding their disadvantage (OECD, 2019^[2]). As such, in order to foster growth that is more inclusive, policy makers in regions in

industrial transition need to ensure that unemployed, underemployed and skills-mismatched groups are supported through well-targeted training measures and comprehensive support provision (OECD, 2019^[2]). Policy makers also need to ensure that employers are sufficiently knowledgeable about how high-skilled workers can strengthen their businesses, which can catalyse them to support the upskilling of local communities to meet their business needs.

Promoting better employment standards and fostering economic inclusion through bottom-up policy action

Fostering economic inclusion in regions in industrial transition, which, as discussed above, is one pathway to delivering inclusive growth, can be challenging. For instance, ill health, either mental or physical, can play a role in limiting labour force participation, as can childcare responsibilities. Moreover, employers in certain sectors may have a preference for offering insecure work contracts, which can limit the hours that people are able to work (Coyle et al., 2019^[29]). At the same time, the tools available to regional policy makers to address these issues can be limited. For instance, the relevant employment legislation is often set at the national level and regional authorities can lack the legal authority to alter it (OECD, 2023^[16]).

Low productivity is another barrier to economic inclusion in regions in industrial transition. A lack of relevant skills can hinder a person's ability to work in higher-wage roles or industries (Coyle et al., 2019^[29]). However, while regional policy makers may be able to help address these issues through reskilling initiatives, they may also lack detailed knowledge of the skills needed by different sectors, which has the potential to limit the initiatives' effectiveness.

Initiatives to support economic inclusion do not have to be implemented in a top-down manner. Rather, they can also work effectively by building societal consensus from the bottom up. For example, regions in industrial transition can set up voluntary initiatives that encourage organisations to raise employment standards and improve the economic inclusion of disadvantaged or under-represented groups. One such example is the Greater Manchester Good Employment Charter (Box 3.10). A voluntary initiative, its criteria proactively encourage employers to support economic inclusion, including enticing them to implement health-related support policies, make adjustments for people with long-term health conditions and disabilities, and support a specialised training plan for each staff member that allows them to develop their skills (OECD, 2023^[16]).

Box 3.10. The Greater Manchester Good Employment Charter

The Greater Manchester Good Employment Charter is an experimental initiative dedicated to improving employment standards across the region. Run by the Greater Manchester Combined Authority (GMCA), it is a voluntary membership and assessment scheme to proactively encourage local employers from all sectors to promote fair pay, good working conditions and inclusive career opportunities. At the core of charter-related activities is the charter document itself, which outlines seven principles of good employment to which employers in Greater Manchester should aspire, along with related criteria. Several elements of the charter encourage employers to support economic inclusion, including requiring them to implement health-related support policies, make adjustments for people with long-term health conditions and disabilities, and support a specialised training plan for each staff member that allows them to develop their skills.

The Good Employment Charter was experimental in several ways:

1. An extensive process of co-design and co-implementation involving stakeholders from a wide range of backgrounds has helped charter stakeholders to define a collective vision of good employment that is both ambitious and realistic for employers. This has encouraged small,

medium and large organisations, including NGOs, from a wide range of sectors across Greater Manchester, to involve themselves in its activities.

2. A rigorous monitoring and evaluation system for supporters has helped promote high employment standards in the Greater Manchester region.
3. “Carrot and stick” governance mechanisms associated with the charter have helped ensure employer engagement and adherence. There are over 120 000 employees across the Greater Manchester City Region that currently work for a supporter or member organisation of the charter. The charter’s success in encouraging companies across Greater Manchester to raise their employment standards is also helping to address industrial transition challenges in the region, such as a lack of skilled workers, the exclusion from the workforce of various groups and, by extension, low productivity.

Source: Based on OECD (2023^[16]), Greater Manchester’s High Impact Action: The Greater Manchester Good Employment Charter - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_Greater_Manchester.pdf.

The example of the Greater Manchester Good Employment Charter holds a number of policy lessons for policy makers in regions in industrial transition that seek to pursue inclusive growth, through bottom-up, voluntary, economic inclusion initiatives tied to the labour market:

- **Employer engagement with economic inclusion initiatives depends on strong incentives.** A particularly effective way for voluntary initiatives to generate engagement can be to clearly communicate the benefits they can bring to individual employers. In the case of the Good Employment Charter, two incentives that encouraged large-scale involvement were the significant positive marketing for businesses involved in the charter and the more favourable treatment of charter members and supporters in regional public procurement processes.
- **Business-to-business mentoring can help demonstrate to employers how profitability and economic inclusion can be complementary.** In addition to workers, economic inclusion can also benefit businesses, for instance through its ability to improve their productivity by building the skills of employees. However, this value can sometimes be difficult to quantify, while certain additional costs may create unease about its economic feasibility. One effective way for providing reassurance in this regard involved pairing businesses that were new to the charter process with other businesses that were already members. The mentorship of the latter category helped the former gain confidence that the initiative could be implemented without significantly impacting profitability.

Supporting economic inclusion by building employer demand for higher skills

Obstacles to economic inclusion not only include a lack of skills supply, as discussed above. Rather, they can also be the result of a lack of employer demand for higher-productivity skills (Coyle et al., 2019^[29]). For instance, employers might not be aware of how new technologies could positively affect their business. By extension, they might also not be aware of the skills that are required to operationalise these technologies effectively. This presents a missed opportunity for local employees, who have the potential to improve their material well-being and quality of life through upskilling to fit these regional labour market gaps. There is, therefore, a need for experimental initiatives that can foster economic inclusion by building employers’ demand for skills.

One such experimental policy action, from Cantabria, Spain, sought to improve economic inclusion and inclusive growth by promoting societal innovation among companies in rural areas, many of which were struggling to retain workers and had staff that required upskilling (Box 3.11). The initiative focused specifically on building demand and providing support for green and digital technologies. It helped generate

awareness of the economic benefits associated with such technologies and the commensurate level of skills required to operate them. As such, the initiative demonstrated the potential to catalyse (re-investment and training in local communities, in order to equip them with skills that can improve local business productivity and stimulate local wage growth.

Box 3.11. Advancing industrial transition through a societal innovation approach to industrial transition in Cantabria, Spain

The economy of Cantabria, on the northern coast of Spain, has historically relied on agriculture, fishing and small-scale industry. However, it faces several challenges as it works towards its objective of developing a more modern and sustainable economy while ensuring traditional industries are not left behind. These include a lack of collaboration among innovation and a limited culture of innovation, isolated rural areas and their limited attractiveness for younger generations, a lack of green and digital skills for industrial transition in traditional industries, and a lack of knowledge and resources for smaller companies to obtain funds to innovate.

The agri-food sector is particularly affected by these challenges, which is why the Cantabrian Regional Government's Directorate-General for Innovation, Technological Development and Industrial Entrepreneurship developed a societal innovation initiative for this sector. The first step involved creating a repository of agri-food companies with the potential to develop innovative sustainability, digitalisation or social projects to test solutions for the region's industrial transition challenges. This repository also provided a comprehensive picture of the Cantabrian agri-food sector.

Next, the innovation directorate organised a training course for other directorates of the regional government, local governments, interested companies, university centres, researchers and groups of employees at risk of exclusion from the labour market. The course focused on the transition to a low-carbon economy, the importance of digitalisation and the corresponding upskilling and reskilling needs.

Last, the directorate funded 3 projects that supported approximately 20 local companies to find new solutions related to energy use, digitalisation, collaboration and social inclusion. The supported companies were workforce intensive, requiring upskilling and were struggling to retain workers in rural areas.

The HIA gained the support of different actors through its engagement mechanisms. At the start, it was conducted through face-to-face interviews with agri-food companies, something it had never done in the past. The interviews allowed the regional government to display its interest in the companies' work and their challenges, generating interest and company support. The expert responsible for conducting the interviews facilitated identifying synergies between companies or activities that were not previously considered and putting the different parties in contact. This approach helped the HIA gain the support of businesses that were difficult to reach physically, particularly those in isolated mountainous areas that did not initially see how the initiative could benefit them.

Source: Based on OECD (2023^[7]), Cantabria's High Impact Action: Social Inclusion in the Primary Industries- In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_Cantabria.pdf.

Better identifying the skills employers demand on the one hand and, on the other, building their demand for specific skills such as digitalisation skills holds a number of lessons for policy makers:

- **Advancing green and digital technologies by building an awareness of their importance and upskilling workers in their use can contribute to industrial transition**, especially in

less-connected rural and remote areas. By enhancing awareness and skills, not only can rural businesses better adapt to industrial transitions and leverage opportunities presented by emerging technologies but local employees can develop their own economic value, which can help enhance their material well-being and quality of life. Policies or programmes that increase firm knowledge of the benefits associated with these areas and provide corresponding training programmes for local employees are one way to go about this.

- **Facilitating access to contacts and providing modest financial support can empower rural companies and projects to join in the industrial transition.** Introducing policies that connect companies with relevant contacts and offer limited financial assistance to support initiatives focused on energy efficiency, renewable energy adoption and digitalisation, for example, can help mitigate the challenges associated with remoteness in rural areas and create momentum for business development (including in terms of skills).

Summary of main insights into how new policy levers can help regions in industrial transition overcome inclusive growth challenges

One way to foster inclusive growth and generate greater well-being in industrial transition regions is by removing barriers to economic inclusion, including in terms of boosting: i) labour force participation; and ii) the economic value of underutilised workers. Experimental policy action can help policy makers address both of these dimensions. In particular, bottom-up voluntary initiatives aimed at employers can build momentum for them to lift employment standards, which in turn can help to build momentum for improved labour force participation and worker productivity. In addition, initiatives aimed at improving building employer demand for new green and digital technologies can also create impetus for the upskilling of local communities.

Dimension 9: Smart specialisation strategies and their intersection with industrial transition and experimentation

An objective of the overall pilot action undertaken with the regions and countries was to help reinforce the next generation of S3s and identify if an experimental approach could support this ambition. What became clear is that the lessons that policy makers learned from adopting a more experimental approach to governance arrangements and policy design for industrial transition could help them better use their S3 to overcome industrial transition challenges in a number of the dimensions explored above.

Intersections between experimental approaches and S3s

More effectively helping industrial SMEs manage the industrial and societal transitions was one clear area where experimentation and S3 aims dovetail. For example, the Hauts-de-France region found that supporting the digital transformation of traditional industrial SMEs was better served by providing long-term coaching and mentoring for existing SME employees, rather than by providing financial support for SMEs to hire digitalisation managers (OECD, 2023^[11]). This insight helped the region shape its 2021-27 smart specialisation projects. A strong focus of smart specialisation in East and North Finland was on business innovation and the commercialisation of innovative products in new and emerging sectors (OECD, 2023^[10]). This was the result of its HIA that tested a new funding model, which explicitly targeted close-to-market innovations and confirmed a greater need for additional assistance in this area.

Furthermore, regions and countries saw how sustainability and inclusivity aims associated with industrial transition could also be advanced through smart specialisation. The experimental policy actions that promoted a sustainable industrial transition also supported S3 aims by integrating environmental considerations, promoting resource efficiency and supporting the transition to a low-carbon economy. For

example, the experimentation and lessons learned from the Industrial Parks of the Future project in Grand Est, France fed and improved the region's S3, which is strongly focused on technologies and equipment to help manage the industrial transition. They also improved the tools and systems used for the sustainable and smart management of natural resources and energy systems (OECD, 2023^[28]). In addition, the focus on inclusiveness in some of the HIAs helped marginalised groups and/or remote communities take advantage of smart specialisation. This was seen in Cantabria, which successfully built its capacity to engage traditional SMEs in rural and remote areas in transition projects, and helped these SMEs become more energy-efficient and sustainable (OECD, 2023^[7]). Embedding these learnings into its revised smart specialisation strategy 2021-27 was among Cantabria's plans.

Finally, S3 provides an avenue for scaling up successful innovation policy pilots. While the S3 is targeted to already established industries or innovation activities in a region or country, the pilot or experiment can help expand S3-related activities. Wallonia used its revised S3 for the 2021-27 period to scale a new approach to industrial transition and innovation (OECD, 2023^[5]). It placed a significant emphasis on tackling societal and industrial transition challenges in the region. Lessons learned from the experimental policy action – including the value of a challenge-based approach and the value of stakeholder engagement throughout the project cycle were then applied to Wallonia's S3 renewal process.

Testing new smart specialisation governance models

Regions in industrial transition face a series of governance challenges when it comes to implementing S3s. Noteworthy among these is a lack of clarity in the roles different actors play in S3 implementation, as well as limited collaboration in the Entrepreneurial Discovery Process. Often, certain groups, particularly SMEs, have been under-represented in consultations on smart specialisation priorities. Furthermore, mechanisms to promote co-ordination among S3 actors are often lacking in industrial transition regions (Kristensen, Pugh and Grillitsch, 2022^[30]). The presence of a variety of actors and the importance of ensuring proper co-ordination lies in the cross-sectoral nature of industrial transition and that successful transition requires action in more than one policy area, or one dimension, at once. Yet, many regions may lack the necessary institutional capacity to address the multifaceted challenges presented (OECD, 2019^[2]).

Just as an experimental approach to initiatives for advancing industrial transition can be valuable, using it to advance smart specialisation can also be valuable in its capacity to promote interagency co-ordination and collaboration, engage stakeholders, advance knowledge exchange and learning, and leverage regional networks. Small-scale policy experiments are one way to test the practical application of new governance structures for enhancing smart specialisation. Box 3.12 provides examples of how pilot actions have reinforced flexible and efficient governance for smart specialisation.

Box 3.12. Examples of smart S3 models inspired by experimental policy action in regions in industrial transition

- **East and North Finland's** seven sub-regions each have their own S3. They also have a long history of co-operation. In 2018, the seven regions developed a close model of co-operation, called ELMO. The ELMO model produced a joint East and North Finland in Industrial Transition Smart Specialisation Strategy 2019-2023, which co-exists with each sub-region's S3. This model supported the close co-ordination of S3 project implementation among the seven sub-regions and achieved better results advancing industrial transition. Long-term collaboration among East and North Finland's seven sub-regions will continue in the Smart Specialisation in East and North Finland 2022–2027 (ELMO II) project.
- **Slovenia's** Smart S3 contains ten smart specialisation priorities. All of them are governed by newly established Strategic Research and Innovation Partnerships (SRIPs) that bring together

quadruple helix representatives. Slovenia's pilot action to implement a collaborative innovation voucher system tested one of the SRIPs with the aim of supporting the development of Smart Industries (Industry 4.0) and Smart Factories. The pilot action served as an initial step in determining the viability of these partnerships and SRIPs can be seen as a large-scale follow-up of the pilot action. The pilot action demonstrated that smart specialisation priorities should be defined based on partnerships involving the private sector, knowledge institutions, the state and other stakeholders.

- **Wallonia** introduced five Strategic Innovation Areas (SIAs) as part of its updated smart specialisation strategy. Once the SIAs were established, the region opened a call to express interest in Strategic Innovation Initiatives (SIIs) – concrete projects that could meet the objectives of the SIAs. Contrary to previous initiatives, SIIs were not project-based calls with a pre-defined budget. Instead, they represented an expression of interest from innovation stakeholders in the region, seeking collaboration on identified issues within the area, such as enhancing healthcare innovation, renewing energy systems and promoting sustainable housing. This approach was initially tested through Wallonia's HIA (Box 3.2).

Source: Based on OECD (2023^[4]), "Slovenia's High Impact Action: Establishing an Industry 4.0 Transformative Mechanism - In-depth assessment", https://www.oecd.org/regional/governance/RIT_HIA_Slovenia.pdf; OECD (2023^[5]), "Wallonia's High Impact Action: "Plastics Go Green and Circular" Challenge - In-depth assessment", https://www.oecd.org/regional/governance/RIT_HIA_Wallonia.pdf; OECD (2023^[10]), East and North Finland's High Impact Action: Cross-regional Voucher System to Stimulate Digitalisation and Circular Economy in the Tree, Wood, and Timber Value Chain - In-depth assessment, https://www.oecd.org/regional/governance/RIT_HIA_East_North_Finland.pdf.

Recommendations for meeting the S3 enabling condition on actions for managing industrial transition

In the 2021-27 EU Cohesion Policy period, EU regions were requested to update their S3 and respond to the following seven "enabling conditions":

1. Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation.
2. Existence of a competent regional/national institution or body, responsible for the management of the S3.
3. Monitoring and evaluation tools to measure performance towards the objectives of the strategy.
4. Effective functioning of the entrepreneurial discovery process.
5. Actions necessary to improve national or regional research and innovation systems.
6. Actions to manage industrial transition.
7. Measures for international collaboration.

Experimental approaches to governance and policy in industrial transition regions could be helpful to meet S3 Enabling Condition 6 "Actions to manage industrial transition" in their ability to promote new and targeted funding possibilities, collaboration, skills development and learning mechanisms. Such action can help to build capacity to support innovation in the updated S3s. Box 3.13 offers some ideas as to how experimentation can be applied to building capacity for smart specialisation based on findings in this project. In addition, the experimental approaches show that it is possible to use experimentation to influence Enabling Conditions 4 and 5. While this may be indirect, the experience gained through the deep stakeholder consultation, and the efforts seen in the High Impact Actions to expand innovation and innovation diffusion to other firms or sectors can only serve to support these.

Box 3.13. Using experimentation to build capacity for smart specialisation

Experimental governance and policy frameworks can be used to build capacity for smart specialisation in a variety of ways. This project highlighted the following:

- **Promoting a culture of experimentation:** Encouraging policy makers and stakeholders to embrace experimentation as a means of generating new ideas, testing innovative approaches and learning from failures. This can be achieved by creating supportive environments, providing funding for pilot projects and establishing platforms for knowledge exchange and collaboration.
- **Facilitating cross-sector collaboration:** Smart specialisation requires collaboration among various stakeholders, including government agencies, businesses, research institutions and civil society organisations. Experimentation can facilitate the formation of partnerships and networks, fostering the exchange of knowledge and resources across sectors. By bringing together diverse perspectives and expertise, collaborative initiatives can generate synergies and uncover new opportunities for specialisation.
- **Establishing policy experimentation labs:** Policy experimentation labs serve as dedicated spaces for testing and evaluating new policies, programmes and regulations. These labs can be designed as safe spaces to pilot innovative approaches and assess their effectiveness before scaling them up. Through iterative testing and learning, policy makers can refine their strategies and make evidence-based decisions to support smart specialisation.
- **Encouraging bottom-up innovation:** Experimental policy and governance frameworks should empower local communities and stakeholders to contribute to the smart specialisation process. By engaging citizens, entrepreneurs and community organisations, policy makers can tap into local knowledge and foster grassroots innovation. This can be achieved through participatory approaches, such as open innovation platforms and co-creation workshops.
- **Learning from evaluation and feedback:** Experimental policy and governance frameworks should emphasise continuous evaluation and learning. Rigorous monitoring and evaluation mechanisms help assess the impact of interventions, identify success factors and learn from failures. By incorporating feedback loops, policy makers can adapt their strategies based on evidence, refine their policies and ensure that capacity-building efforts align with the evolving needs of the region.

Source: Based on Wolfe, D. (2018^[31]), "Experimental governance: Conceptual approaches and practical cases", [https://www.oecd.org/cfe/regionaldevelopment/Wolfe\(2018\)ExperimentalGovernanceConceptualApproaches.pdf](https://www.oecd.org/cfe/regionaldevelopment/Wolfe(2018)ExperimentalGovernanceConceptualApproaches.pdf).

Conclusion

The OECD's work with the regions and countries participating in this pilot has illustrated the benefits of experimenting with governance and policy arrangements when seeking to advance industrial transition, as well as making adjustments to existing initiatives to improve their impact. The various HIAs highlighted the relevance of governance dimensions to the success of industrial transition initiatives, including framework conditions, strategic programming and active stakeholder engagement. While regions are limited in their ability to control most framework conditions, the HIAs demonstrate that there is often room for experimentation within set parameters. With regards to strategic programming, implementation and evaluation, the various actions demonstrated the importance of establishing clear guidelines to support the design and implementation of experimental initiatives – along with clear governance structures for the action, effective co-ordination and resource support. The importance and difficulties of establishing

monitoring and evaluation mechanisms to support performance measurement and learning from the experiment itself also became apparent. Furthermore, the actions also delineate the value of building effective stakeholder engagement and networks, through which knowledge, resources and learning can be shared among public, private and civil society actors when developing and implementing experimental solutions to industrial transition.

This pilot action and the work undertaken by the participating regions and countries have illustrated the benefits of experimenting with governance and policy arrangements when seeking to advance industrial transition, as well as making adjustments to existing initiatives to improve their impact. As seen in the case of East and North Finland, for example, experimenting with new funding models can promote the uptake of transition-supporting initiatives in areas that are hard to reach, such as rural and remote territories. Experimentation with non-financial support mechanisms can be equally helpful to advance industrial transformation aims. The cases of Greater Manchester and Wallonia offer an example. Moreover, the HIAs underscore the role that policy experimentation can play in supporting regional smart specialisation aims – part of the experience in Grand Est.

Consideration of these elements as well as the experiences of the participating regions and countries in the design and implementation of their actions can help other regions and countries to develop policies that better address their own industrial transition challenges.

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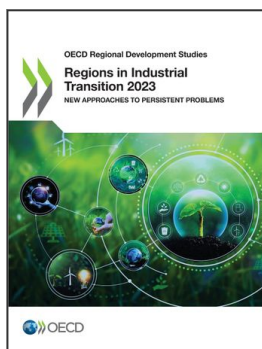
Notes

¹ The full list of pilot participants in the High Impact Action phase of the project were: Cantabria (Spain), Centre-Val de Loire (France), East and North Finland (Finland), Grand Est (France), Greater Manchester (United Kingdom), Hauts-de-France (France), North Middle Sweden (Sweden), Wallonia (Belgium), Lithuania and Slovenia.

² These include France Relance, France 2030, and *Territoires d'Industrie* (Industrial Territories), all of which support a relaunch of French industrial competitiveness and investment (see project case study on Grand Est) (OECD, 2022^[32]).

³ The steering committee was composed of representatives from different departments of the regional administration, regional clusters, the regional innovation agency, SOWALFIN and the region’s Cabinet of the Minister of Economy and Innovation (OECD, 2022^[9]).

⁴ After the May 2023 elections in Cantabria, it is unclear if this remains the intention.



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